

In the Claims

1. [Currently Amended] A wireless communication system comprising:
an interrogator including:
a housing including circuitry configured to generate a forward link communication signal, the circuitry comprising a microcontroller and a Radio Frequency (RF) section including RF circuitry and switching circuitry;
a plurality of communication circuitry, with each configured to communicate the forward link communication signal to one of; and
a plurality of communication station stations remotely located with respect to the housing, with each station having a separate communication range, and each station individually configured to receive the forward link communication signal from [[the]] one of the communication circuitry and to radiate a forward link wireless signal corresponding to the forward link communication signal, wherein the wireless signal is to be radiated within the communication range of the respective communication station, and the microcontroller of the housing is to control the switching circuitry to selectively couple one of the communication circuitry with the RF circuitry; and
a remote communication device configured to receive the forward link wireless signal, [[; and]]
wherein the circuitry of the housing comprises a transmitter configured to generate the forward link communication signal comprising a modulated signal.
2. [Currently Amended] The wireless communication system according to claim 1 further comprising a driver amplifier coupled with the circuitry of the housing and configured to increase the power of the forward link communication signal and to apply the forward link communication signal to an input of at least one of the communication circuitry.
3. [Currently Amended] The wireless communication system according to claim 1 wherein the communication station includes adjustment circuitry configured to receive the forward link communication signal from [[the]] a communication circuitry and to adjust an electrical characteristic of the forward link communication signal.

4. [Original] The wireless communication system according to claim 3 wherein the adjustment circuitry comprises automatic gain control circuitry.
5. [Original] The wireless communication system according to claim 4 wherein the automatic gain control circuitry is configured to monitor the power of the forward link communication signal and adjust the power of the forward link communication signal responsive to the monitoring.
6. [Currently Amended] The wireless communication system according to claim 1 wherein ~~[[the]]~~ each communication station includes a power amplifier configured to receive the forward link communication signal from ~~[[the]]~~ a communication circuitry and to amplify the forward link communication signal.
7. [Currently Amended] The wireless communication system according to claim 6 wherein ~~[[the]]~~ each communication station includes an antenna configured to receive the forward link communication signal from the power amplifier and to radiate the forward link wireless signal.
8. [Original] The wireless communication system according to claim 1 wherein the remote communication device includes a radio frequency identification device.
9. [Currently Amended] The wireless communication system according to claim 1 wherein ~~[[the]]~~ at least one of the communication circuitry includes a coaxial RF cable.
10. [Currently Amended] The wireless communication system according to claim 1 wherein ~~[[the]]~~ at least one of the communication circuitry includes a plurality of transceivers individually coupled with one of the housing and ~~[[the]]~~ a communication station.
11. [Currently Amended] An interrogator of a wireless communication system comprising:
a housing including circuitry configured to generate a forward link communication signal;

a plurality of communication circuitry outside of the housing and coupled with the circuitry of the housing and each communication circuitry configured to communicate the forward link communication signal to an individual one of a plurality of communication stations remotely located with respect to the housing;

~~[[a]] the plurality of communication stations~~ ~~station remotely located with respect to the housing~~ and including an antenna coupled with the communication circuitry and configured to radiate a forward link wireless signal corresponding to the forward link communication signal; and

wherein the circuitry of the housing comprises a transmitter configured to generate the forward link communication signal comprising a modulated signal.

12. [Currently Amended] The interrogator according to claim 11 further comprising a driver amplifier coupled with the circuitry of the housing and configured to increase the power of the forward link communication signal and to apply the forward link communication signal to an input of at least one of the communication circuitry.

13. [Currently Amended] The interrogator according to claim 11 wherein ~~[[the]]~~ each communication station includes adjustment circuitry configured to receive the forward link communication signal from ~~[[the]]~~ a communication circuitry and to adjust at least one electrical characteristic of the forward link communication signal.

14. [Original] The interrogator according to claim 11 wherein the adjustment circuitry comprises automatic gain control circuitry.

15. [Original] The interrogator according to claim 14 wherein the automatic gain control circuitry is configured to monitor the power of the forward link communication signal and adjust the power of the forward link communication signal responsive to the monitoring.

16. [Currently Amended] The interrogator according to claim 11 wherein ~~[[the]]~~ each communication station includes a power amplifier configured to receive the forward link

communication signal from ~~[[the]]~~ a communication circuitry and to amplify the forward link communication signal.

17. [Currently Amended] The interrogator according to claim 11 wherein ~~[[the]]~~ each communication station includes an antenna configured to receive the forward link communication signal from the power amplifier and to radiate the forward link wireless signal.

18. [Original] The interrogator according to claim 11 wherein the remote communication device comprises a radio frequency identification device.

19. [Currently Amended] The interrogator according to claim 11 wherein at least one of the communication circuitry includes a coaxial RF cable.

20. [Currently Amended] The interrogator according to claim 11 wherein at least one of the communication circuitry includes a plurality of transceivers individually coupled with one of the housing and ~~[[the]]~~ a communication station.

21. [Currently Amended] An interrogator of a wireless communication system comprising:

a housing including circuitry configured to generate a ~~plurality of~~ forward link communication ~~signals~~ signal, and switching circuitry to select at least one of a plurality of communication stations to receive the forward link communication signal;

[[a]] the plurality of communication stations remotely located with respect to the housing and individually, configured to receive ~~at least one of~~ the forward link communication ~~signals~~ signal from the housing and radiate a forward link wireless signal corresponding to the ~~at least one~~ forward link communication signal; and

wherein the circuitry of the housing is configured to generate the forward link communication signal comprising a modulated signal.

22. [Currently Amended] The interrogator according to claim 21 wherein the communication stations individually include adjustment circuitry configured to receive the ~~at least one~~ forward

link communication signal and to adjust at least one electrical characteristic of the forward link communication signal.

23. [Original] The interrogator according to claim 22 wherein the adjustment circuitry includes automatic gain control circuitry.

24. [Currently Amended] The interrogator according to claim 21 further comprising a plurality of communication circuits individually configured to communicate ~~at least one~~ the forward link communication signal intermediate the housing and one of the communication stations.

25. [Original] The interrogator according to claim 21 wherein the communication stations are individually positioned to radiate the forward link wireless signal within one of a plurality of communication ranges.

26. [Canceled]

27. [Currently Amended] A method of communicating within a wireless communication system comprising:

providing an interrogator and ~~at least one~~ a plurality of remote communication ~~device~~ devices;

generating a forward link communication signal using circuitry within a housing of the interrogator;

selecting at least one of a plurality of communication circuitry, using switching circuitry of the housing, to transmit the forward link communication signal to a corresponding one of a plurality of communication stations, each communication station having a separate communication range;

communicating the forward link communication signal from the housing using a selected communication circuitry;

the communication station receiving the forward link communication signal from the selected communication circuitry, ~~within a~~ the communication station of the interrogator remotely located from the housing;

radiating a forward link wireless signal corresponding to the forward link communication signal using the communication station, wherein the wireless signal is radiated within a respective communication range of the communication station;

receiving the forward link wireless signal within [[the]] at least one of the plurality of remote communication ~~device~~ devices; and

wherein the generating comprises generating the forward link communication signal comprising a modulated signal using the circuitry within the housing.

28. [Original] The method according to claim 27 further comprising amplifying the forward link communication signal before the communicating.

29. [Original] The method according to claim 27 further comprising adjusting at least one electrical characteristic of the forward link communication signal before the radiating.

30. [Original] The method according to claim 29 wherein the adjusting comprises adjusting using automatic gain control circuitry.

31. [Original] The method according to claim 29 wherein the adjusting includes:
monitoring the power of the forward link communication signal within the communication station; and
adjusting the power of the forward link communication signal responsive to the monitoring.

32. [Original] The method according to claim 31 wherein the monitoring includes:
adjusting a threshold value corresponding to a distance intermediate the housing and the communication station; and
comparing the power of the forward link communication signal received from the communication circuitry with the threshold value.

33. [Original] The method according to claim 27 further comprising amplifying the forward link communication signal within the communication station before the radiating.

34. [Currently Amended] The method according to claim 27 wherein the providing ~~at least one~~ the plurality of remote communication ~~device~~ devices comprises providing a radio frequency identification device.

35. [Currently Amended] A method of communicating within a wireless communication system comprising:

providing an interrogator having a housing and ~~at least one~~ a plurality of communication ~~station~~ stations remotely located from the housing;

generating a forward link communication signal using circuitry within the housing;

communicating the forward link communication signal from the housing using at least one of a plurality of communication paths, each communication path corresponding to a separate one of the plurality of communication stations ~~circuitry~~;

receiving the forward link communication signal from the communication circuitry within ~~[[the]]~~ one of the plurality of communication stations ~~stations~~;

radiating a forward link wireless signal corresponding to the forward link communication signal using the communication station; and

wherein the generating comprises generating the forward link communication signal comprising a modulated signal using the circuitry within the housing.

36. [Original] The method according to claim 35 further comprising amplifying the forward link communication signal before the communicating.

37. [Original] The method according to claim 35 further comprising adjusting at least one electrical characteristic of the forward link communication signal before the radiating.

38. [Original] The method according to claim 37 wherein the adjusting includes adjusting using automatic gain control circuitry.

39. [Original] The method according to claim 37 wherein the adjusting includes:
monitoring the power of the forward link communication signal within the communication station; and
adjusting the power of the forward link communication signal responsive to the monitoring.
40. [Currently Amended] The method according to claim 39 wherein the monitoring includes:
adjusting a threshold value corresponding to a distance intermediate the housing and the communication station; and
comparing the power of the forward link communication signal received from the communication ~~circuitry~~ path with the threshold value.
41. [Original] The method according to claim 35 further comprising amplifying the forward link communication signal within the communication station before the radiating.
42. [Canceled]
- 43-50. [Canceled]
51. [Currently Amended] The wireless communication system according to claim 1 wherein [[the]] at least one communication station is configured to convert the forward link communication signal comprising the modulated signal from a first communication medium type to a second communication medium type comprising a wireless medium and different than the first communication medium type.
52. [Previously Presented] The wireless communication system according to claim 51 wherein the first communication medium type comprises a wired medium.
53. [Currently Amended] The wireless communication system according to claim 1 wherein [[the]] at least one of the communication circuitry comprises a wired medium configured to

communicate the forward link communication signal comprising the modulated signal intermediate the housing and the communication station.

54. [Previously Presented] The wireless communication system according to claim 4 wherein the automatic gain control circuitry is configured to adjust the electrical characteristic of the forward link communication signal comprising the modulated signal which comprises a wired signal.

55. [Previously Presented] The method according to claim 35 wherein the radiating comprises converting the forward link communication signal comprising the modulated signal from a first communication medium type to a second communication medium type comprising a wireless medium and different than the first communication medium type.

56. [Previously Presented] The method according to claim 55 wherein the first communication medium type comprises a wired medium.

57. [Previously Presented] The method according to claim 35 wherein the communicating comprises communicating the forward link communication signal comprising the modulated signal from the housing using a wired medium.

58. [Currently Amended] A communications method comprising:
generating a polling signal using circuitry of a source;
modulating the polling signal using a radio frequency transmitter of the source, the
modulating providing a modulated polling signal of a first communication medium type;
first communicating the modulated polling signal of the first communication medium
type externally of the source to one of a plurality of communication stations remotely located
with respect to the source, including using a switch of the source to select one of a plurality of
communication paths, with each communication path corresponding to one of the plurality of
communication stations, and each communication station have a separate communication range;
receiving the modulated polling signal of the first communication medium type within
[[a]] the communication station remotely located with respect to the source;

converting the modulated polling signal from the first communication medium type to a second communication medium type different than the first communication medium type using circuitry of the communication station; and

second communicating the modulated polling signal of the second communication medium type to a transponder remotely located with respect to the source and the communication station.

59. [Previously Presented] The method of claim 58 wherein the first and the second communicating comprise communicating using different communications media.

60. [Previously Presented] The method of claim 59 wherein the communications media comprise a wire and electromagnetic energy for communicating respective ones of the polling signals of the first and the second communication medium types.

61. [Previously Presented] The method of claim 58 wherein the source comprises a housing and the first communicating comprises communicating externally of the housing.

62. [Previously Presented] The method of claim 58 wherein the modulating comprises RF modulating.

63. [Previously Presented] The method of claim 62 wherein the modulating comprises modulating a carrier signal using a data signal configured to implement polling of the transponder.

64. [Previously Presented] The wireless communication system according to claim 1 wherein the forward link communication signal generated by the circuitry of the housing comprises data including a command.

65. [Previously Presented] The method according to claim 27 wherein the generating the forward link communication signal comprises generating the signal comprising data including a command.

66. [Previously Presented] The method of claim 58 wherein the second communicating comprises communicating using the communications station.

67. [Previously Presented] The method of claim 58 wherein the first and the second communicating comprise communicating using a wire and electromagnetic energy for communicating respective ones of the polling signals of the first and the second communication medium types, and wherein the modulating comprises RF modulating.